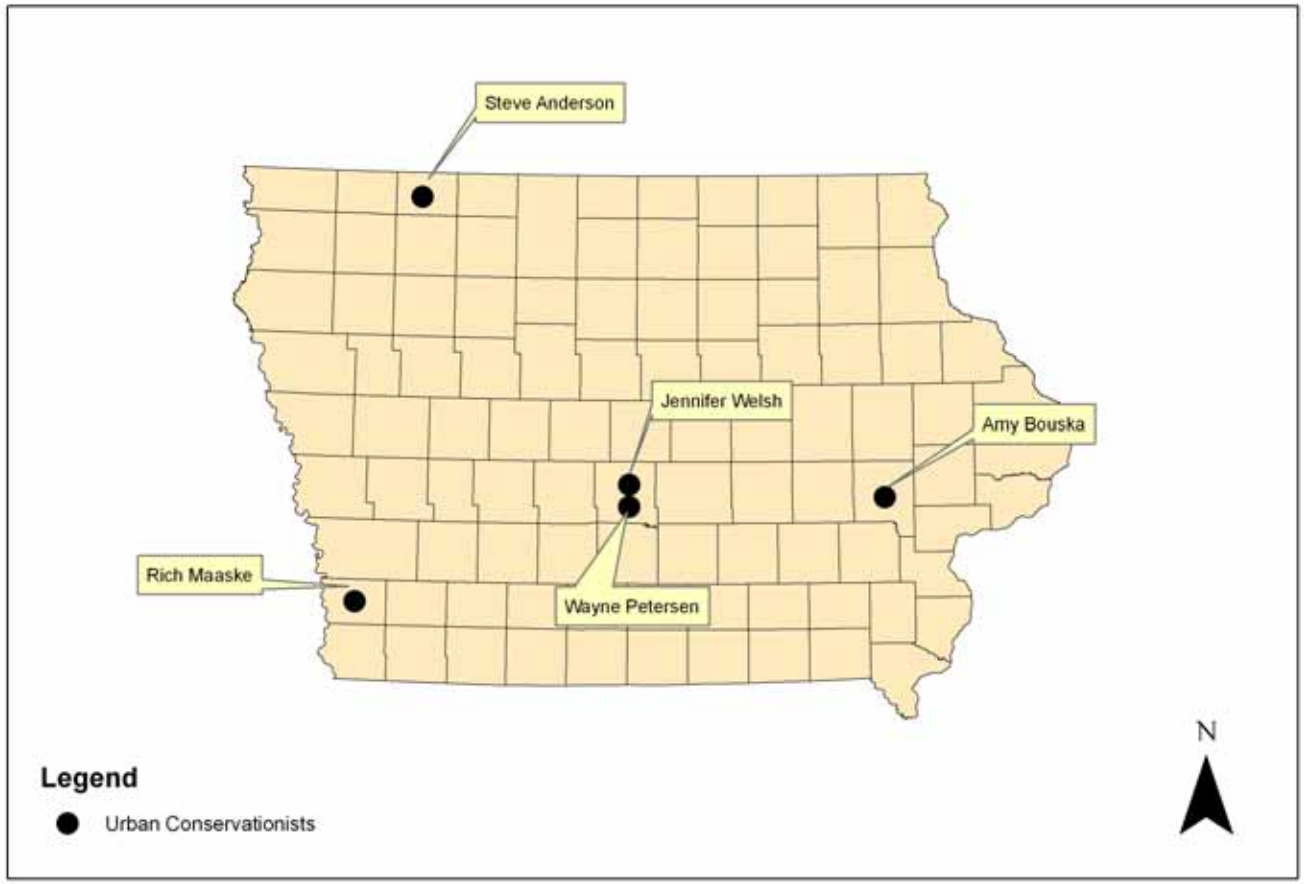
Urban Conservation Program: Assisting Projects

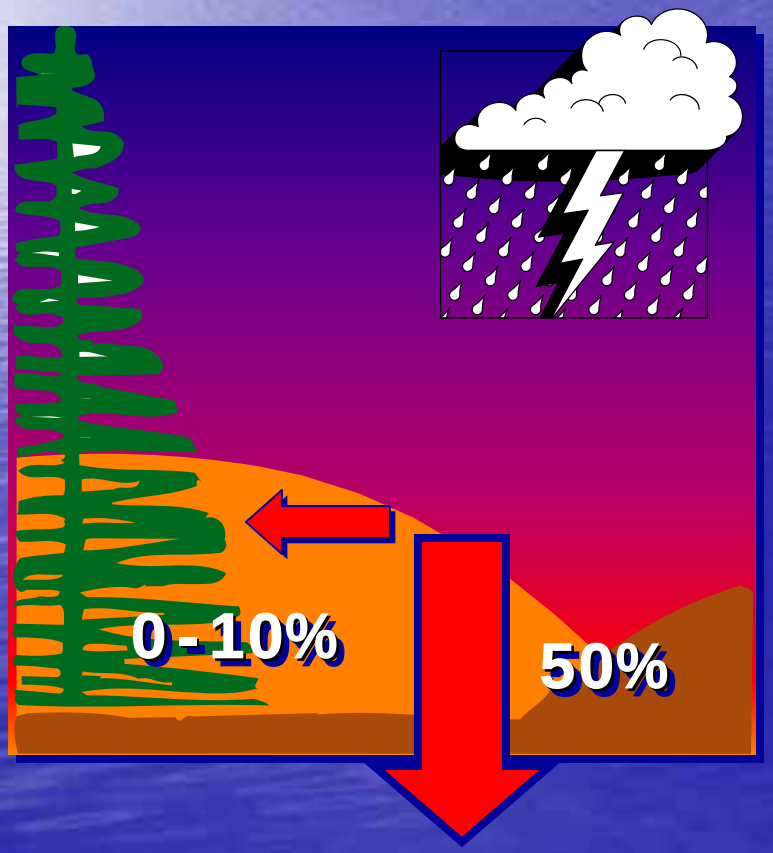
Urban Conservationist Locations

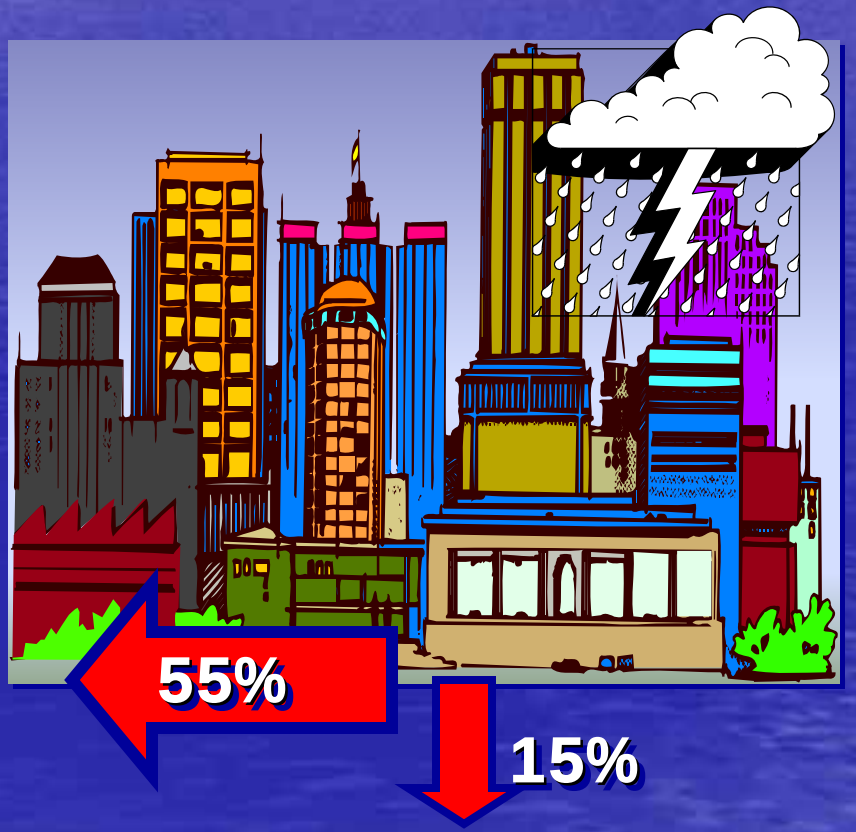


Each area has slightly different focus depending on local needs

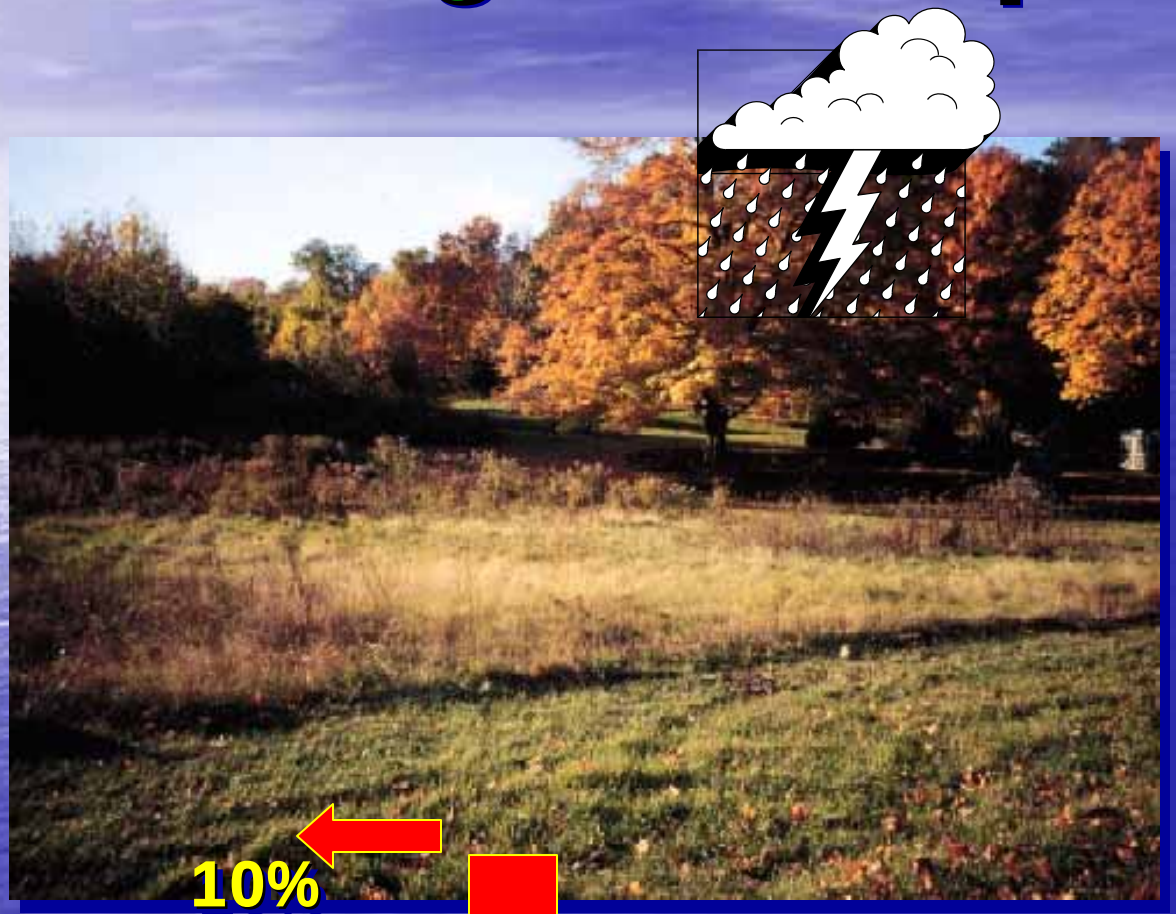
So what, I work in an ag watershed and live in a small town.

Historic Hydrology
vs.
Modern Hydrology





Design Principles



Retain rain on site.

Mimic the hydrology of the native ecosystems.

Infiltrate more. Shed less.

Open Space Developments

- same number of housing units
- 10-50% less impervious surface
- up to 50% open space
- water resources protected

From Randall Arendt

Green Infrastructure

Making Green Infrastructure and Amenity

Construction site erosion and sediment control

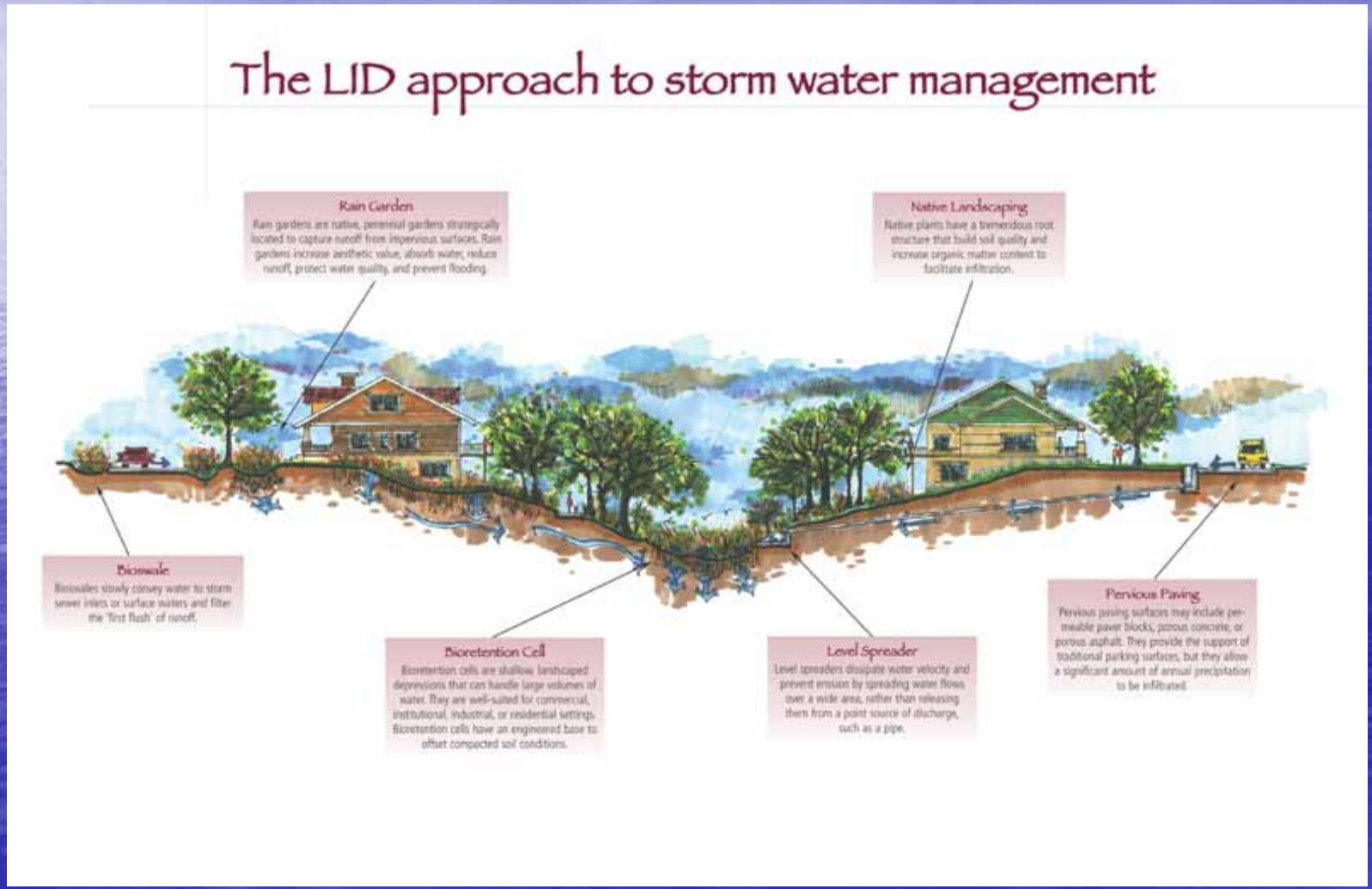
New developments

- Infiltrate smaller rainfalls and retain larger events
- Different from traditional storm water design

How much rain water really flows off my yard?

- Average rainfall in Iowa: 28-36 inches per year
- Acre of land receives anywhere from 760,000 to 977,500 gallons of water per year
- 1/4 acre urban lot receives ~217,188 gallons per year
- To calculate the amount of water off your yard, contact at Rain Water Audit at www.jcswcd.org

Low Impact Development



Rain Gardens

- Landscaping functioning for water quality
- Shallow depression (6-8 inches in depth)
- 6” Amended soil matrix of 60% sand, 30% compost & 10% topsoil underneath depression
- Landscaped with deep rooted native plants
- Mulch for weed control

Key to Successful Rain Gardens

- Proper Design
  typical rain garden handles ¼ of roof
  http://www.iowastormwater.org/Portals/0/pdf/RainGardenMan2.pdf
- Adequate Soils (ideal soil-sandy loam)
- Proper Plant Selection
  http://www.prrcd.org/inl/recommended_plants.htm
- Maintenance (mulch weed barrier)
- Upcoming certification trainings (4/15/09 & 5/29/09)

Bioswales

Existing Yards

Aerate soils prior to compost application

Turf grass after application of compost

Sources of Nutrients

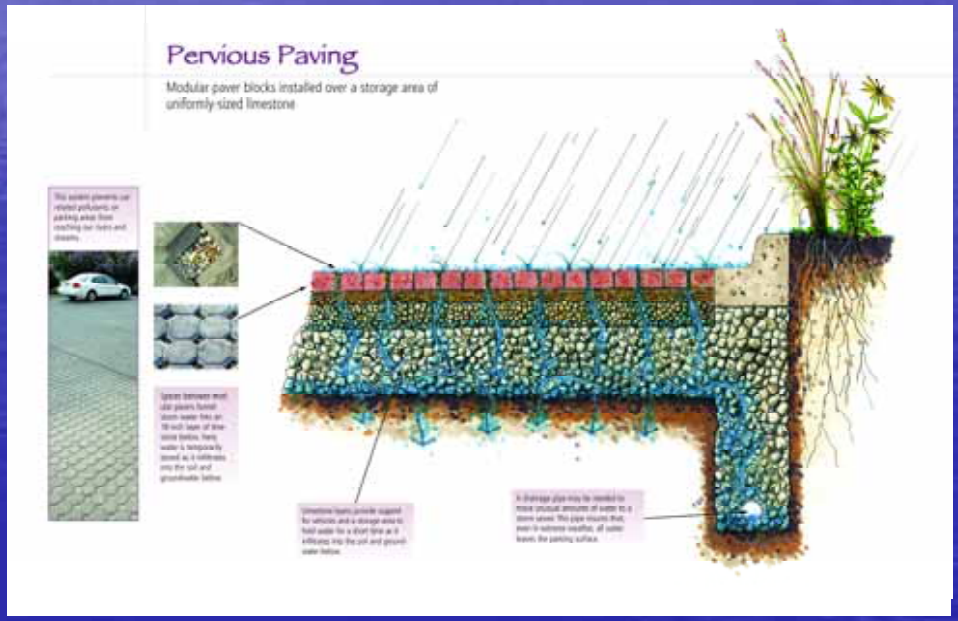
Source: Steve Potts, EPA

Lawn Fertilizer

- Take representative soil samples from your yard
- Get your soil analyzed
- Purchase fertilizer according to soil test results

- Lawn clippings are a natural source of nitrogen

Permeable Pavement



Ordinance Development

- Planning and Zoning regulations
- Erosion and Sediment Control
- Storm water runoff
- Sensitive Areas

Other Water Quality Concerns

- Well head protection-providing safe drinking water
- Unsewered communities and nonfunctioning septic systems, functioning systems located in the floodplain

Sources of funding for urban practices

SWCD can submit request to State Soil Conservation Committee to use REAP funds for storm water mgmt practices in a watershed

Black Hawk
Delaware
Dickinson
Johnson
Madison
Mills
Muscatine
Polk
Pottawattamie – West
Scott
Story
Wapello
Warren

Other funding

- Urban Storm Water BMP Loan Program

  http://www.iowaagriculture.gov/FieldServices/stormwaterBMPloans.asp

- Local Initiatives (cost-share provided by local municipalities, 28E agreements, conservation bond, casinos, 319, and WIRB)

"The Department has years of experience working with farmers and believes this is just the beginning of efforts to assist urban areas. Urban Conservationists will help communities install new systems and retrofit existing infrastructure in a way that will move the water off our streets while keeping soil and pollutants out of our waterways. Our goal is to have urban and rural areas working together to protect our soil and improve water quality in the state."

Secretary of Agriculture Bill Northey

http://www.iowaagriculture.gov/FieldServices/urbanConservation.asp